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09/757,886	01/10/2001	Bernardinus Henricus Bosmans	TS0968 (US)	8086

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EXAMINER

BUSHEY, CHARLES S

ART UNIT	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 17

Application Number: 09/757,886

Filing Date: January 10, 2001

Appellants: BOSMANS ET AL.

Jennifer D. Adamson
For Appellants

EXAMINER'S ANSWER

MAILED
JUL 16 2003

GROUP 1700

This is in response to the appeal brief filed May 27, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The amendment after final rejection filed on May 27, 2003 has not been entered.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-10 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *ClaimsAppealed*

Claim 1 contains substantial errors as presented in the Appendix to the brief.

Accordingly, claim 1 is correctly written in the Appendix to the Examiner's Answer.

(9) Prior Art of Record

0 092 262 A1	EPO	10-1983
4,496,430	JENKINS	1-1985
5,230,839	SAMPATH et al	7-1993
WO 99/12621	WIPO	3-1999
6,299,146	YU et al	10-2001

(10) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Claims 7 and 8 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 99/12621 (Fig. 9).

Claims 1, 2, 7, and 8 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by EP 0 092 262 A1 (Figs. 1 and 2).

Claims 3-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 092 262 A1.

EP 0 092 262 A1 (Figs. 1 and 2) as applied to claims 1, 2, 7, and 8 above, substantially discloses appellant's invention as recited by instant claims 3-5, except for the lower end cross-section of the downcomer being between about 10% and 30% of the upper end cross-section of the downcomer, as recited by appealed claim 3, the liquid discharge opening being an elongated opening, as recited by appealed claim 4, and each of the downcomers extending entirely across the respective tray, as recited by appealed claim 5. The EP reference does disclose that the lower end cross-section of the downcomer, according to the reference drawings, is about 33% of the upper end cross-section of the downcomer, the liquid discharge opening is in the form of a series

of circular openings fed by an elongated channel opening, and that at least some of the downcomers extend entirely across the tray of the reference (see Fig. 2). It would have been obvious for an artisan at the time of the invention, to modify the structure of the reference apparatus to conform to the claim limitations of appealed claims 3-5, since such would not deviate from the general teachings of the reference and would only modify the operation thereof in a manner well understood and expected by one having ordinary skill in the art.

Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 092 262, as applied to claim 1 above, and further in view of Jenkins.

EP 0 092 262 (Figs. 1 and 2) as applied to claim 1 above, substantially discloses appellant's invention as recited by appealed claim 6, except for the downcomers being alternately arranged relative to a diametrical line that divides the tray into two sections.

Jenkins (Abstract; Figs. 4, 13 and 14; col. 6, lines 10-13) disclose trays divided into sections along a diametrical line, and downcomers arranged alternately relative to the line on each of the tray sections. It would have been obvious for an artisan at the time of the invention, to modify the trays, as taught by the primary reference, to include two sections divided along a diametrical line, and to provide alternating downcomers on each of the sections, in view of Jenkins, since such would allow for greater contact between the phases on each of the trays within the column.

Claims 9 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over either WO 99/12621 or EP 0 092 262 as applied to claims 7 and 8 above, and further in view of either Sampath et al or Yu et al.

WO 99/12621 (Fig. 9) and EP 0 092 262 (Figs. 1 and 2) as alternatively applied to claims 7 and 8 above, each substantially disclose appellant's invention as recited by appealed claim 9, except for inlet weir means being provided between the area just below the liquid discharge openings of the respective downcomers and the adjacent bubble area.

Sampath et al (106 in Fig. 3) and Yu et al (4 in Fig. 2) each alternatively disclose inlet weir means being provided between the area just below the liquid discharge openings of the respective downcomers and the adjacent bubble area. It would have been obvious for an artisan at the time of the invention, to provide the area just below the liquid discharge openings of the respective downcomers of either of the alternative primary references, with an inlet weir, in view of either of the secondary references, since such would even the flow of liquid across the bubble zone, thereby maximizing the phase contact on the tray in a well known manner.

(II) Response to Argument

Appellant's arguments filed May 23, 2003 have been fully considered but they are not persuasive.

With respect to the initial argument directed to the rejection of claims 7 and 8 under 35 U.S.C. 102(b) over WO 99/12621, applicant is relying upon the amendment after final made to claim 7 to overcome the rejection of claims 7 and 8. As stated in the Advisory Action mailed June 25, 2003, the amendment proposed therein by appellant to appealed claim 7, has not been entered and will not be entered for purposes of this appeal. The rejection of record must therefore stand. In view of the fact that appellant has stated that all of the appealed claims are to stand or fall together, the Board of Appeals and Patent Interferences is respectfully requested to

therefore affirm the Examiner's rejection of appealed claim 7 and thus, in view of the grouping of claims, to affirm all rejections of record.

It is noted that appellant has not separately argued the rejections set forth against instant claims 6, 9, and 10. Instead appellant has chosen to imply that the rejections thereon are moot in view of the alleged deficiencies of the primary references applied there against. However, as discussed above in the rejection statements, as well as herein below, such allegations are not appropriate, nor persuasive.

With respect to the rejections of claims 1, 2, 7, and 8 as anticipated by EP 0 092 262, and claims 3-5 as obvious over EP 0 092 262, appellant's arguments are not persuasive. Appellant alleges that the drawings of the reference cannot be considered to anticipate or render obvious the claims, since the drawings are not indicated as being to scale and there is no discussion within the reference specification as to the specific dimensions of the drawing elements. This is not persuasive since, as stated in MPEP 2125—Drawings as Prior Art, "it does not matter that the feature shown is unintended or unexplained in the specification. The drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art." *In re Aslanian*, 200 USPQ 500 (CCPA 1979). Furthermore, appellant's contention that, without a specific discussion of the reference drawing dimensions within the reference specification, one must assume that the dimensions of the reference structure must meet what appellant decides are typical dimensions as set forth by a single text book discussion (Kister) within a reference of appellant's choosing, is certainly not a persuasive showing. At best such an argument would be self-serving in nature and as such without merit.

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Lastly, so as to avoid confusion with respect to the definition of the claim phraseology pertaining to the downcomer opening "at tray level", such has been defined by appellant, as the opening of the downcomer at the top end thereof (13,113) with respect to the drawings and discussion pertaining thereto.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Scott Bushey
Primary Examiner
Art Unit 1724


7-14-03

csb
July 14, 2003

Conferees
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Appendix to the Examiner's Answer

Correct Copy ofAppealed Claim 1.

1. A gas-liquid contacting tray comprising:
a bubble area; and,
one or more rectangular downcomers each having a length and a width wherein the length is longer than the width, and an upper and lower end, wherein each downcomer shares two boundaries with the bubble area along the length comprising:
two sloped downcomer walls along the length;
a downcomer opening at tray level; and,
one or more downward directed liquid discharge openings at its lower end;
wherein the downcomers are so positioned on the tray that the bubble area is present along the length, wherein the cross-sectional area at the lower end of the downcomer is less than about 40% of the cross-sectional area of the upper end of the downcomer at tray level.